

depositing a nitride layer; and
introducing oxygen into generally all of said nitride layer within said memory cell.

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5. A method for improving the charge retention in a nitride layer of a memory cell, said method comprising:

depositing a nitride layer;
controlling the thickness of said deposited nitride layer; and
introducing oxygen into generally all of said nitride layer within said memory cell.

Kindly add the following new claims:

--7. A method of manufacturing a programmable, read only memory device, the method comprising:

forming a first oxide layer on a substrate,
forming a nitride layer on top of said oxide layer, wherein said nitride layer is 100 angstroms or less thick;
introducing oxygen into generally all of said nitride layer within a memory cell during formation of a second oxide layer on top of said nitride layer;
 patterning said oxide-nitride-oxide (ONO) layers into desired patterns; and
 forming a gate layer over said patterned ONO layer.

8. A method according to claim 7 and wherein said first oxide layer is approximately 50 - 150 angstroms thick.

9. A method according to claim 7 and wherein said first oxide layer is approximately 80 angstroms thick.

10. A method according to claim 7 and wherein said nitride layer is approximately 20 - 150 angstroms thick.

11. A method according to claim 7 and wherein said second oxide layer is approximately 50 - 150 angstroms thick.

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12. A method according to claim 7 and wherein said forming said second oxide layer comprises consuming a portion of said nitride layer.

13. A programmable, read only memory device comprising:
two diffusion areas in a substrate and a channel formed therebetween;
an ONO layer at least over said channel comprising:
a first oxide layer;
a substantially oxygenated nitride layer having a thickness of 100 angstroms or less overlaying said first oxide layer; and
a second oxide layer overlaying said nitride layer,
said first and second oxide layers having a thickness that is the same order of magnitude as said nitride layer; and
a gate at least above said ONO layer.--